KIRSANOVA, G.A.; PURUSOVA, G.A.; BELITSIN, M.N., inzh.; VOLKOVA, N.A., inzh.

Assortment of synthetic fibers. Khim.volok. no.6:78 '59. (MIRA 13:5)

1. Klinskiy kombinat iskusstvennogo kombinata.
(Textile fibers, Synthetic--Congresses)

BIRGER, G.Ye.; IVANOVA, Ye.P.; KIRSANOVA, G.A.; KOCHETKOV, L.M.; NOVIKOVA, N.D.; PURUSOVA, G.A.

Labor productivity in synthetic fiber factories. Khim.volok. no.1:40-43 '60. (MIRA 13:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna.

(Textile fibers, Synthetic)
(Textile factories--Labor productivity)

BIRGER, G.Ye.; KIRSANOVA, G.A.

R.Robson's book "The man-made fibres industry" reviewed by G.E.Birger, G.A.Kirsanova. Khim.volok. no.3:78-79 '60. (MIRA 13:7)

(Textile fibers, Synthetic)
(Robson, R.)

IVANOVA, Ye.P.; KIRSANOVA, G.A.

Labor productivity in the capron fiber industry. Khim.volok. no.5:60-64 '60. (MIRA 13:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna.

(Nylon)

IVANOVA, Ye.P., starshiy nauchnyy sotr.; ZERNOV, Ye.V., prepodavatel'; KIRSANOVA, G.A., nauchnyy sotr.; NOVIKOVA, N.D., nauchnyy sotr.; TARASOVA, N.D.; RISHINA, R.G., starshiy inzh.; LEVINSKIY, V.B., red.; SHPAK, Ye.G., tekhn. red.

[Work organization and establishing technical standards in enterprises manufacturing synthetic fibers] Organizatsiia truda i tekhnicheskoe normirovanie na predpriiatiiakh khimicheskikh volokon. By E.P.Ivanova i dr. Moskva, Gos. nauchno-tekhn.izd-vo khim. lit-ry, 1961. 175 p. (MIRA 15:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna (for Ivanova, Kirsanova, Novikova). 2. Moskovskiy tekstil'nyy institut (for Zernov). 3. Nachal'nik normativno-issledovatel'skoy laboratorii po trudu Kalininskogo kombinata (for Tarasova). 4. Gosudarstvennyy komitet po khimii pri Sovete Ministrov SSSR (for Rishina).
(Textile fibers, Synthetic—Production standards)

KIRSANOVA, G.A.; ABUBAKIROVA, A.A.

Technical and economic indices of the production of lavsan and nitron staple fibers. Khim.volok. no.3:59-62 '61. (MIRA 14:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna (for Kirsanova). 2. Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M.V.Lomonosova (for Abubakirova).
(Orlon) (Rayon)

BIRGER, G.Ye.; KIRSANOVA, G.A.

"Location of the synthetic fiber industry in the U.S.A." by J.Airov. Reviewed by G.E.Birger, G.A.Kirsanova. Khim.volok. no.5:71-73 '61. (MIRA 14:10)
(United States—Textile fibers, Synthetic)
(Airov, J.)

KIRSANOVA, G.A.

Ways of improving the technological and economic indices in the manufacture of capron filament for textile uses. Khim. volok. no.3:73-76 '62. (MIRA 16:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna.

(Nylon)

BIRGER, G. Ye.; IVANOVA, Yu. P.; KIRSANOVA, O. A.

Prospects for the development of the production and uses of synthetic fibers. Khim. volok. no.6:2-6 '62. (MIRA 16:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna.

(Textile fibers, Synthetic)

IVANOVA, Ye.P.; KIRSANOVA, G.A.

World production of synthetic fibers in 1963. Khim. volok. no.2:1-7 '65. (MIRA 18:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna.

[illegible]; [illegible], N.M.

Radiation necrosis of the brain; observation in practice. Med. rad. 10 no.7:72-75 Jl '65. (MIRA 18:9)

1. Radiologicheskoye otdeleniye (zav. - doktor med. nauk A.K. Gus'kova) Kliniki Instituta gigiyeny truda i profzabolevaniy AMN SSSR, Moskva.

L 23776-66 EWT(m)

ACC NR: AP6015257 SOURCE CODE: UR/0241/65/010/007/0072/0075

AUTHOR: Kirsanova, O. I.; Doshchenko, N. M.

ORG: Radiological Department /headed by Dr. of medical sciences A. K. Gus'kova/, Clinic, Institute of Labor Hygiene and Occupational Diseases, AMN SSSR, Moscow (Radiologicheskoye otdeleniye Kliniki Instituta gigiyeny truda i profzabolevaniy AMN SSSR)

TITLE: Radiation necrosis of the brain: observations from practical experience

SOURCE: Meditsinskaya radiologiya, v. 10, no. 7, 1965, 72-75

TOPIC TAGS: brain, radiation injury, x ray irradiation, radiation biologic effect, bioelectric phenomenon, EEG, pathology

ABSTRACT: A patient with postradiation damage to the central nervous system caused by X-ray irradiation of the head was observed by the authors. Patient K., 22 years old, was a carpenter. He was married, had a 1½-year-old child. In the past he had been healthy, had never been sick. In March-April 1960 due to microsporia, the hairy portion of the head, skin of the face, neck, and shoulder blades underwent roentgenoepilation. The exposure dose was about 1,500 roentgens (irradiation of five fields at a dose level of 289 roentgens per field). Falling out of hair began first in the temporal area parasagitally; and here there appeared a long-unhealed ulcer after some time (1-1.5 weeks). For 2½ years of observation no growth of hair on the head was noted. The overall condition of the patient was good. There were no changes in

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the blood. According to observations of those near him, the patient in 1961 briefly lost consciousness three or four times, and at the same time was subjected to weakening of the skeletal muscles. In one year five months, on 7 September 1961 the patient noted for the first time an involuntary seisure of his right foot, and then again on 14 September, an overall epileptic fit developed which began with spasmodic seizures of the right foot, followed by the spread of debility in it and general psychomotor excitation. In 10-12 days the seizure was repeated. Pneumoencephalographic data during this period revealed no pathology. The craniogram was free of alterations. From the piezographic data, disruption in intracranial circulation was noted in the left hemisphere, manifested as a persistent increase in vascular tone, with a tendency toward constriction. A substantial decrease in bioelectrical activity was noted on the electroencephalogram, more to the right, and epileptic activity from both sides, more to the left. Based on clinical data, the development of a glioma was assumed. Operative intervention was recommended. In an operation on 4 October 1962 the brain substance was found to be edemic, and the brain swelled into the trephining opening. Sections of the cortex and white matter in the left upper temporal lobe were removed because of suspicion of tumor growth. In time microscopy the cerebral matter was found to be highly edemic, permeated by blood free of signs of tumor growth. Upon subsequent careful

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ACC NR: AP6015257

histological examination, the cerebral matter proved to be edemic with extensive necrotic foci. The walls of some of the vessels were hyalinized; the vessels were dilated; and there were many extensive hemorrhages. The short period for formation of the pathological process, severity of clinical manifestations, and the strict locality of the damage to all tissues subjected to irradiation, from the skin of the temporal region to the white matter of the brain afford grounds to suggest that the dose the patient received in the head region approximated 5,000-10,000 roentgens. It is not possible to find out the true dose level at this time.

Orig. art. has: 2 figures. [JPRS]

SUB CODE: 06 / SUBM DATE: 19Apr64

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KONDRASHEV, Denis Dmitriyevich, doktor ekon. nauk; LEPNIKOVA, Ye., red.; KIRSANOVA, I., mlad. red.; MOSKVINA, R., tekhn. red.

[Price and value in the socialist economy] Tsena i stoimost' v sotsialisticheskom khoziaistve. Moskva, Sotsekgiz, 1963. 391 p. (MIRA 16:12)

(Prices) (Value)

VASIL'YEV, Igor' Vladimirovich; GARSIA, L., red.; KIRSANOVA, I.A., mladshiy red.; CHEPELEVA, O., tekhn.red.

[State capitalism in present-day Burma] Gosudarstvennyi kapitalizm v sovremennoi Birme. Moskva, Izd-vo sotsial'no-ekon.lit-ry, 1961. 169 p. (MIRA 14:6)

(Burma—Economic conditions)

KAPUSTIN, Ye.I., kand. ekonom. nauk; ORLOVSKIY, I.A.; SHKURKO, S.I.; BUDARINA, V., red.; KIRSANOVA, I., mladshiy red.; CHEPELEVA, O., tekhn. red.

[Wages and their improvement in U.S.S.R. industry] Zarabotnaia plata v promyshlennosti SSSR i ee sovershenstvovanie. Pod red. E.I.Kapustina. Moskva, Izd-vo sotsial'no-ekon. lit-ry, 1961. 201 p. (MIRA 15:3)

1. Moscow. Nauchno-issledovatel'skiy institut truda.
(Wage payment systems)

MOSHENSKIY, Mark Grigor'yevich; BORISOVA, K., red.; KIRSANOVA, I., mladshiy red.; CHEPELEVA, O., tekhn. red.

[Wage forms and systems in the industry of capitalist counties] Formy i sistemy zarabotnoi platy v promyshlennosti kapitalisticheskikh stran. Moskva, Izd-vo sotsial'no-ekon. lit-ry, 1961. 261 p. (MIRA 15:1)

(Wage payment systems)

VOZNESENSKIY, Lev Aleksandrovich; GARSIA, L., red.; KIRSANOVA, I., mlad. red.; CHEPELEVA, O., tekhn. red.

[Using belles-lettres in teaching economics] Khudozhestvennaia literatura v predpodavanii politicheskoi ekonomii. Izd.2., dop. Moskva, Izd-vo sotsial'no-ekon.lit-ry, 1961. 285 p. (MIRA 14:12)
(Economics--Study and teaching)

VATOLINA, Lidiya Nikolayevna. Prinimal uchastiye GASHEV, B.N.
ROSHCHINA, L., red.; KIRSANOVA, I., mladshiy red.;
ULANOVA, L., tekhn.red.

[Economy of the United Arab Republic] Ekonomika Ob"edinennoi Arabskoi Respubliki. Moskva, Izd-vo sotsial'no-ekon.lit-ry, 1962. 77 p. (MIRA 15:4)
(United Arab Republic--Economic conditions)

IN'KOV, Yuriy Ivanovich; BORISOVA, K., red.; NAZAROVA, V., red.; KIRSANOVA, I., mladshiy red.; ULANOVA, L., tekhn.red.

[Radioelectronics in the service of the military monopolies of the U.S.A.] Radioelektronika na sluzhbe voennykh monopolii SShA. Moskva, Izd-vo sotsial'no-ekon.lit-ry, 1962. 124 p. (MIRA 15:4)

(United States—Electronic industries)

BOZHDEDOMOV, Aleksandr Ivanovich; KOZODOYEV, I.I., prof., red.; GARSIA, L., red.; DARONYAN, M., mladshiy red.; KIRSANOVA, I., mladshiy red.; MOSKVINA, R., tekhn. red.

[Petroleum leases in capitalist countries] Neftianaia renta v stranakh kapitalizma. Pod obshchei red. I.I.Kozodoeva. Moskva, Sotsekgiz, 1962. 337 p. (MIRA 15:7)
(Oil and gas leases)

VDOVICHENKO, N.Kh.; DMITRASHKO, I.I., kand. tekhn. nauk; ZHELUDKOV, A.P.; ZLOMANOV, L.P.; KALPIN, G.Z.; NIZHNYY, N.I.; NIKITINA, M.V.; ROMANENKO, I.N.; BUDARINA, V., red.; USTINOV, M., red.; KIRSANOVA, I., mladshiy red.; NOGINA, N., tekhn. red.

[Agricultural wages in the U.S.S.R.] Oplata truda v sel'skom khoziaistve SSSR. [By] Vdovichenko, N.Kh. i dr. Moskva, Sotsekgiz, 1962. 147 p. (MIRA 15:6)
(Agricultural wages)

PETROV, Anatoliy Stepanovich; BUDARINA, V., red.; KIRSANOVA, I., mladshiy red.; NOGINA, N., tekhn. red.

[Work and the creative capacity of the masses]Trud i tvorchestvo mass. Moskva, Sotsekgiz, 1962. 185 p. (MIRA 16:2)
(Efficiency, Industrial)

KOZLOVA, O.V., doktor ekon. nauk, prof.; BISHAYEV, M.; LENSKAYA, S.; MURZOV, K.; BUDARINA, V., red.; KIRSANOVA, I., mladshiy red.; ULANOVA, L., tekhn. red.

[Communal labor during the period of the large scale building of communism] Obshchestvennyi trud v period razvernutogo stroitel'stva kommunizma. Pod obshchei red. O.V.Kozlovoi. Moskva, Sotsekgiz, 1963. 306 p. (MIRA 16:7)
(Labor and laboring classes) (Communism)

KOLOSOV, Aleksandr Fomich. Prinimal uchastiye: IVANOV, Ye.A., nauchnyy sotr.; LEPNIKOVA, Ye., red.; KIRSANOVA, I., mladshiy red.; KORNILOVA, V., tekhn. red.

[Capital assets and their role in the socialist reproduction of the means of production (using industry as an example)] Osnovnye fondy i ikh rol' v sotsialisticheskom vosproizvodstve (na primere promyshlennosti). Moskva, Sotsekgiz, 1963. 245 p. (MIRA 16:7)

1. Sektor osnovnykh fondov Gosudarstvennogo nauchno-issledovatel'skogo ekonomicheskogo instituta Gosplana SSSR (for Ivanov).

(Capital)

USIYEVICH, M.A., kand. ekon. nauk; VIDMAR, V.N., kand. ekon. nauk; STUPOV, A.D., kand. sel'khoz. nauk; STARODUBROVSKAYA, V.N., kand. ekon. nauk; STOROZHEV, V.I., kand.ist. nauk; RUDAKOV, Ye.V., kand. ekon. nauk; KIRANOV, P., prof.; KHORVAT, L. [Horvat, L.], kand. ekon. nauk; KROMM, K., doktor; FRUKK, Kh. [Frukk, H.], doktor; SHMIDT, V.[Schmidt, V.], prof., doktor; TEPIKHT, Ye.[Tepicht, E.], prof.; NIK, S. [Nic,S.], kand. ekon. nauk; DUMITRIY, D.[Dumitro, D.]; SVOBODA, K., kand. ekon. nauk; LEPNIKOVA, Ye., red.; KIRSANOVA, I., mladshiy red.; NOGINA, N., tekhn. red.

[Socialist reorganizations in the agriculture of the European people's democracies] Sotsialisticheskie preobrazovaniia v sel'skom khoziaistve evropeiskikh stran narodnoi demokratii. Moskva, Sotsekgiz, 1963. 334 p. (MIRA 16:7)

1. Akademiya nauk SSSR. Institut ekonomiki mirovoy sotsialisticheskoy sistemy.2. Institut ekonomiki mirovoy sotsialisticheskoy sistemy AN SSSR (for Usiyevich, Vidmar, Stupov, Starodubrovskaya, Storozhev, Rudakov).
(Europe, Eastern--Agriculture, Cooperative)

ARSENIN, N.D.; BUDKOVSKIY, N.G.; BOLOTIN, A.A.; BONARTSEVA, N.N.; BOGDANOVA, M.V.; GOLOVENKO, I.P.; IL'BITENKO, K.I.; KIRPONOS, Ye.M.; KARAPETYAN, K.G.; KIRSANOVA, I.A.; KUZNETSOV, A.L.; KORESHNIKOVA, N.F.; KORZHENEVSKAYA, T.I.; NEMIROV, N.G.; NIKONOVA, T.K.; NAZAROV, V.N.; PISAREVA, I.A.; POPOV, S.A.; PRONINA, N.A.; PAKHMAN, M.Ye.; REYPOLSKIY, S.N.; ROGACHEV, Yu.N.; SOSNINA, V.D.; STARSHINOV, B.M.; KHUDYAKOV, B.Ya.; SHELEKASOV, V.I.; PARKOV, V.P., podpolkovnik, red.; MURAV'YEV, A.I., polkovnik, red.; CHAPAYEVA, R.I., tekhn. red.

[Relics of military glory]Relikvii boevoi slavy. Moskva, Voenizdat, 1962. 166 p. (MIRA 15:8)

1. Nauchnyye sotrudniki TSentral'nogo muzeya Sovetskoy Armii (for all except Murav'yev, Chapayeva).
(Military museums)

KARAVASHKIN, B.K., inzh.; KIRSANOVA, I.K., inzh.

Device for measuring pulse characteristics of an arc. Priboro-stroenie no.12:19-21 D '65. (MIRA 19:1)

KIRSANOVA, M.A.

PHASE I BOOK EXPLOITATION SOV/3450

Termicheskaya obrabotka i svoystva krupnykh pokovok (Heat Treatment and Properties of Large Forgings), Moscow, Mashgiz, 1959. 165 p. 4,000 copies printed.

Reviewer: K.N. Sokolov, Candidate of Technical Sciences; Ed.: P.V. Sklyuyev, Candidate of Technical Sciences; Tech. Ed.: N.A.Dugina; Exec. Ed.(Ural-Siberian Division, Mashgiz): A.V. Kaletina, Engineer.

PURPOSE: This book is intended for technical personnel working in the shops, laboratories, and design offices of plants manufacturing heavy machinery and electrical equipment. It may also be of some interest to research personnel.

COVERAGE: This collection of articles describes methods employed by Uralmashzavod (Ural Heavy Machinery Plant, Sverdlovsk) for heat-treating heavy forgings. Research conducted at the plant is also discussed. Data for computing cooling rates in the quenching and normalizing of heavy forgings are given. A considerable portion of the book is devoted to information on the mechanical properties of rotors for heavy turbogenerators and one-piece steam-turbine rotors at various points along the body and neck of these parts. The main defects occurring in rotors of these types are described, their causes are analyzed, and methods of handling the problem are explained. Results of a study of heavy forgings made of vacuum-treated steel are given. No personalities are mentioned. References accompany most of the articles.

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000722720009-2"

KIRSANOVA, M.A.; SKLYUYEV, P.V.

Relation between hardness and ultimate strength of forged steel pieces and casts. Zav. lab. 31 no.8:1009-1010 '65. (MIRA 18:9)

1. Ural'skiy zavod tyazhelogo mashinostroyeniya imeni Sergo Ordzhonikidze.

KIRSANOVA, M. K.

"Concerning the Rationalization of Multistory (High) Buildings With a Steel Frame." Sub 18 Dec 51, Moscow Order of the Labor Red Banner Construction Engineering Inst imeni V. V. Kuybyshev

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: SUM. No. 480, 9 May 55

KIRSANOVA, M.K.

KUHBATOV, D.I.; NIKOLAYEV, V.I.; KIRSANOVA, M.K.; KUZIN, B.V.; ROMANOV, A.A.; OSMOLOVSKIY, M.S., obshchiy redaktor; DIUMBAUM, N.S., doktor tekhnicheskikh nauk, redaktor [deceased]; GORSHKOV, A.P., redaktor; PECHKOVSKAYA, T.V., tekhnicheskiy redaktor.

[Fireproof construction] Ognestoikoe stroitel'stvo. Pod obshchei red. M.S.Osmolovskogo. Moskva, Gos. izd-vo lit-ry po stroit. i arkhitekture, 1953. 142 p. [Microfilm] (MLRA 8:2)
(Building, Fireproof)

KIRSANOVA, M. K.

KURBATOV, D.I.; NIKOLAYEV, V.I.; KIRSANOVA, M.K.; OSMOLOVSKIY, M.S., redaktor.

[Fireproof construction] Ognestroikoe stroitel'stvo. D.I.Kurbatov, V.I.Nikolaev, M.K.Kirsanova i dr. Pod obshch. red. M.S.Osmolovskogo. Moskva, Gos. izd. lit. po stroitel'stru i arkhitekture, 1953. 143 p. (MLRA 7:11D)

KIRSANOVA, M.K., kandidat tekhnicheskikh nauk; MONFRED, Yu. B., kandidat tekhnicheskikh nauk; SPIVAK, N.Ya., kandidat tekhnicheskikh nauk.

Making large panels in the construction yard. Mekh.stroi.12 no.3: 3-8 Mr '55. (MLRA 8:4)
(Precast concrete construction)

KIRSANOVA, M.K., kandidat tekhnicheskikh nauk; MEMELOVA, Sh.L., starshiy tekhnik.

Characteristics of the organization of production and planning in construction yards. Biul.stroi.tekh. 13 no.10:7-10 O '56. (MLRA 10:1)

1. Nauchno-issledovatel'skiy institut Stroytekhniki Akademii stroitel'stva i arkhitektury SSSR.

(Concrete slabs) (Precast concrete construction)

AUTHORS: Linetskiy, Ya. I. (Engineer), and Kirsanova, M.K. (Cand. Tech. Sci.)

97-5-3/13

TITLE: Organisation and mechanisation of the construction of large-panel type blocks of flats. (Organizatsiya i mekhanizatsiya stroitel'stva krupnopanel'nykh zhilnykh domov).

PERIODICAL: "Beton i Zhelezobeton" (Concrete and Reinforced Concrete) 1957, No.5, pp.193-199. (USSR).

ABSTRACT: The development of the large-panel building system depends on a highly efficient method of assembly. This applies especially to the non-skeleton construction buildings with a medium number of storeys. The latter proved to be the most economic. One firm should be entrusted with the assembly of the complete building as the experience of the VSU (BCY) Combine of Moscow has proved. This is to be preferred to using 3 or 4 specialised firms for the assembly work. The Magnitostroy Combine came to the same conclusions. The proper organisation and coordination of various assembly phases and finishing trades is most important, as well as the organisation of transport and storage of building units. Double-console cranes of the MPS-5 type (МПС-5) are used for assembly. The maximum lifting height = 11.5 - 12 m. Special lorries are used for the transportation of wall panels and

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Organisation and mechanisation of the construction of large-panel type blocks of flats. (Cont.) 97-5-3/13

of partitions, which constitute 70 - 75% of the total number of constructional units in this type of buildings. These lorries have a capacity of 12 t and comprise a "mechanical hose" with a trailer which consists of a frame, front and back fixing stand and 2 side steadying arms. In Leningrad a special lorry for the delivery of panels is used which was produced during the last 2 years by Glavleningradstroy. Its capacity = 12 t. The slabs are placed horizontally on platforms. The whole carrying construction is suspended and swings from a horizontal pivot to avoid breakage. This trailer is of very economical design. Another type of lorry, (illustrated in Fig.5) manufactured by the same factory, comprises a trailer with low framework with a bridge-shaped upper structure. The panels are transported in the vertical position. Shock absorbers are provided against breakage. Carrying capacity = 12 tons. Fig.6 shows a lorry consisting of a trailer constructed to carry panels in the vertical position with no shock absorbers. Capacity = 7 t. A 30 - 35% reduction in the weight of the trailer is recommended. Panel-transporting lorries with a capacity of 25 - 50 tons are planned to save mileage. The lorries

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Organisation and mechanisation of the construction of large-panel type blocks of flats. (Cont.) 97-5-3/13

MAZ - 200 (МАЗ-200) and YaAZ - 210 (ЯАЗ-210) are most suitable for carrying building elements such as floor slabs, landing slabs and balcony slabs. It is most important to select the right type of crane. For 3-5 storey high buildings the cranes BKSM-5-5 (БКСМ-5-5) and BK-5-195 (БК-5-195) of a capacity of 5 tons and an arm reach of 22-22.9 m are recommended. The gantry crane PPK-5 (ПГК-5), capacity = 5 tons, arm-reach = 28 m, working height = 23 m, was also satisfactory. The crane K - 102, capacity = 10 t, mounted on wheels, with inflated tyres, was used during the erection of buildings from small panels. The Minstroydormash has recently manufactured cranes on inflated tyres, Mark K-252, capacity = 25 t, with 24 m long arms. Another new crane is BGK-3/5 (БГК-3/5) with continuous tracked propulsion, capacity = 3 - 5 t, arm length = 12 - 20 m. It is often difficult to negotiate roads because of the width of the crane (5 m). If road difficulties are encountered the crane SKG - 25 (СКГ-25) can be used. The cranes used for the erection of buildings with more than 5 storeys are as follows: BKSM - 5 - 10 (БКСМ - 5 - 10), BTK - 5/8 (БТК - 5/8), BTK - 100 (БТК-100) and BKSM - 14 (БКСМ-14). The assembly

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Organisation and mechanisation of the construction of large-panel type blocks of flats. (Cont.) 97-5-3/13

time for a building, 50 x 12 m in plan, constructed from large panels, with 1 crane working in 2 shifts, is as follows: cellar: 15 - 18 days (taken as 24 hours days), 1 storey: 6 - 7 days, the top storey (including the roof and finishing works): 14 - 16 days.

There are 8 figures.

AVAILABLE:

Card 4/4

KIRSANOVA, M.K.

KIRSANOVA, M.K., kand.tekhn.nauk

Erection and finishing of frameless large-panel apartment houses. Trudy MIIKI no.8:48-56 '57. (MIRA 10:12)
(Moscow--Apartment houses)

KIRSANOVA, M.K., kand.tekhn.nauk; FRUMIN, N.Ye., insh.

Mounting construction elements of large-panel apartment houses directly from trucks. Biul. stroi. tekh. 15 no.9:13-15 S '58. (MIRA 11:10)

1. Nauchno-issledovatel'skiy institut zhilishcha Akademii stroitel'stva i arkhitektury SSSR.
(Apartment houses) (Precast concrete construction)

KIRSANOVA, M.K., kand.tekhn.nauk; FURAYEVA, G.M., insh.

Making products in construction yards. Biul.stroi.tekh. 16 no.2:31-33 F '59. (MIRA 12:2)

1. Nauchno-issledovatel'skiy institut zhilishcha Akademii stroitel'stva i arkhitektury SSSR.
(Concrete construction--Formwork)

GEL'BERG, L.A., kand. tekhn. nauk; LYUBIMOVA, M.S., kand. tekhn. nauk; PARSHINA, K.G., kand. tekhn. nauk; KIRSANOVA, M.K., kand. tekhn. nauk; ZVORYKIN, D.N., kand.tekhn.nauk; ZHAGELEVA, I.I., inzh.; Prinimala uchastiye LAZAREVA, N.N., inzh.; GLAZUNOVA, Z.M., red. izd-va; SHEVCHENKO, T.N., tekhn. red.

[Economics of large-panel housing construction]Ekonomika krupnopanel'nogo zhilishchnogo stroitel'stva. [By]L.A.Gel'berg i dr. Moskva, Gosstroiizdat, 1962. 153 p. (MIRA 16:3)
(Precast concrete construction)

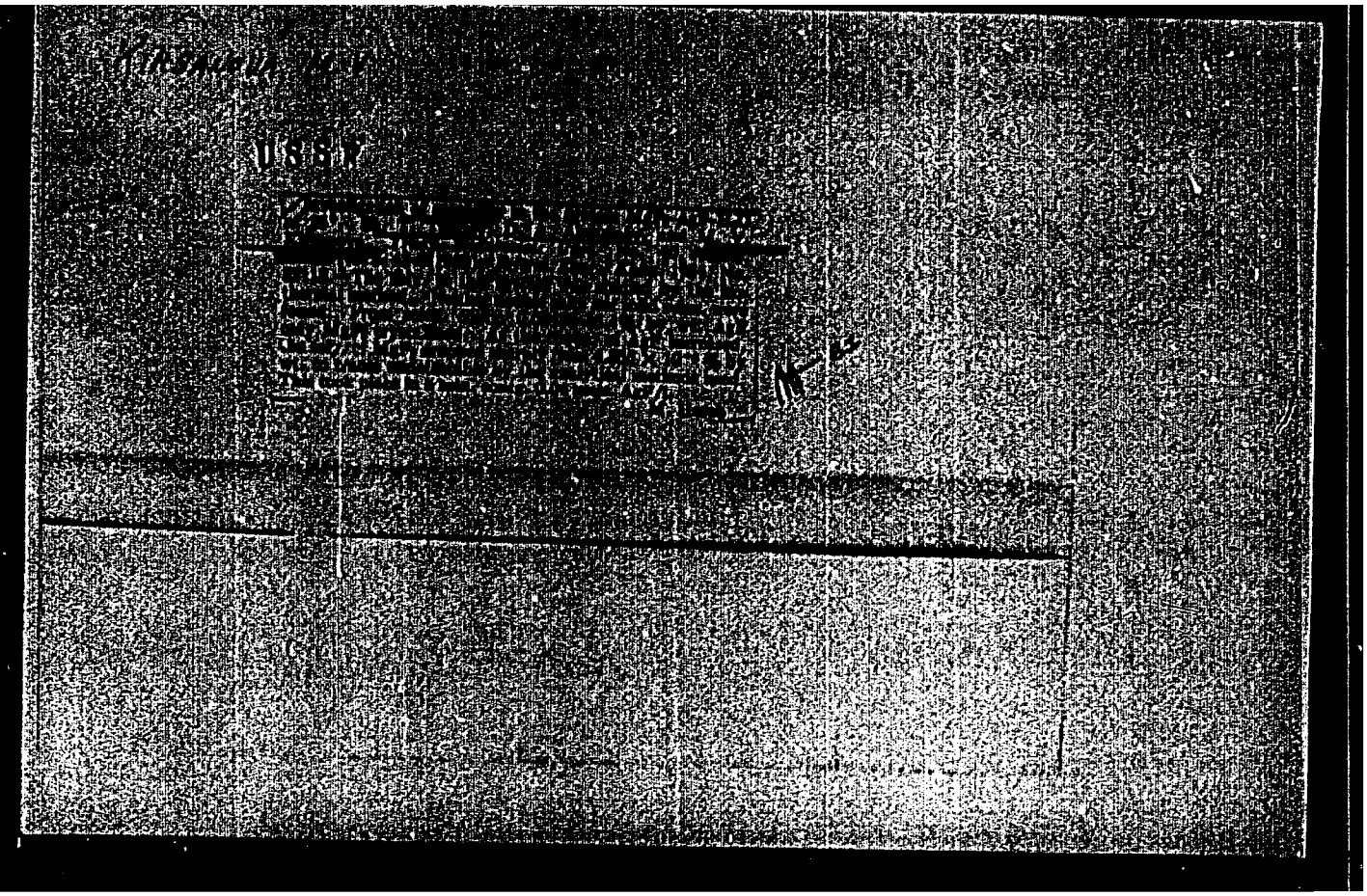
KIRSANOVA, M.K., kand. tekhn. nauk; MIKHANOVSKIY, D.S., inzh.; MONFRED, Yu.B., kand. tekhn. nauk; KREINDLIN, A.N.; SAVKOV,V. BEYUL, O.A., inzh.; ZHUCHKOV, N.

[Means for increasing the capacity of plants prefabricating elements for 1-464A series houses] Puti povysheniia proizvodstvennoi moshchnosti zavodov, vypuskaiushchikh doma seriia I-464A. Moskva, Gosstroiizdat, 1962. 26 p. (MIRA 17:7)

1. Akademiya stroitel'stva i arkhitektury SSSR. TSentral'nyy nauchno-issledovatel'skiy i proyektno-eksperimental'nyy institut industrial'nykh zhilykh i massovykh kul'turno-bytovykh zdaniy. 2. TSentral'nyy nauchno-issledovatel'skiy i proyektno-eksperimental'nyy institut industrial'nykh, zhilykh i massovykh kul'turno-bytovykh zdaniy Akademii stroitel'stva i arkhitektury SSSR (for Kirsanova, Mikhanovskiy, Monfred). 3. Nauchno-issledovatel'skiy institut organizatsii, mekhanizatsii i tekhnicheskoy pomoshchi stroitel'stvu Akademii stroitel'stva i arkhitektury SSSR (for Beyul, Kreindlin, Savkov, Zhuchkov).

KIPSANOVA, M.K., kand. tekhn. nauk; KRYUKOV, R.V., kand. tekhn. nauk; PEYSIKOV, V.A., inzh.

Mobile shield method for molding large panels. Stroi. i dor. mash. 9 no.1:24-28 Ja '64. (MIRA 18:7)



KIRSANOVA, N.

SEREGIN, Andrey Georgiyevich; SMIRNOVA, A., redaktor; KIRSANOVA, N. tekhnicheskiy redaktor.

[At our mechanical bakery] Na nashem khlebozavode. [Moskva] Izd-vo VTsSPS Profizdat, 1954. 43 p. (MLRA 8:8)
(Bakers and bakeries)

5(3)

AUTHORS: Kirsanov, A. V., Kirsanova, N. A. SOV/79-29-6-7/72

TITLE: Derivatives of m- and p-Benzene Disulfonic Acid (Proizvodnyye m- i p-benzoldisul'fokislot)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 6, pp 1802-1813 (USSR)

ABSTRACT: The derivatives of the p-benzene disulfonic acid can be used as initial products for new high-molecular products. The simplest derivatives of the p-benzene disulfonic acid are of particular interest. In the present paper the authors tried the synthesis of the simplest derivatives of the m- and p-benzene disulfonic acid and further that of the m,m'-diphenyl-sulfone-disulfonic acid. The methyl and ethyl esters of the m- and p-benzene disulfonic acid as well as of the m,m'-diphenyl-sulfone-disulfonic acid were obtained by the action of a benzene solution of the corresponding dichloride on sodium alcoholate solutions which were previously concentrated by evaporation in the vacuum to syrupy consistency. When using nearly dry sodium alcoholates the reaction takes place at the boiling temperature of benzene only with a considerable alcohol excess, but it is not

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possible to separate the diesters of the benzene disulfonic acids as they are strongly alkylating agents and therefore react with the excess alcohol. The reaction thus proceeds according to the scheme
$C_6H_4(SO_2Cl)_2 + 2RONa \longrightarrow 2NaCl + C_6H_4(SO_2OR)_2$;
$C_6H_4(SO_2OR)_2 + ROH \longrightarrow ROR + C_6H_4(SO_2OR)SO_2OH$. At a lower alcohol quantity the reaction proceeds slowly in the second step, and it is possible to separate the diester prior to its alkylation. The methyl and ethyl esters of the m- and p-benzene disulfonic acid are crystalline, readily melting compounds and are rapidly saponified when heated in water. It was shown that the methyl esters of the acids mentioned have an intermediary position between the methyl esters of the aryl sulfonic acids and those of the nitroaryl sulfonic acids as far as their alkylating capability is concerned. The phosphazo-reaction was carried out for the diamides of the above-mentioned acids. The following compounds were obtained: m- and p-bis-trichloro-phosphazo-sulfone-phenylene, tetra-acid chlorides of the m- and p-phenylene-bis-sulfonamido-phosphoric acid, m- and p-bis-trialkoxy- and bis-tri-

Derivatives of m- and p-Benzene Disulfonic Acid SOV/79-29-6-7/72

phenoxy-phosphazo-sulfone-phenylene and tetraesters of the m- and p-phenylene-bis-sulfonamido-phosphoric acid (5 Tables). The monoamide-monochloride of the p-benzene-disulfonic acid and a number of N-alkylated amides of the m- and p-benzene disulfonic acid were obtained. There are 5 tables and 17 references, 9 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii Akademii nauk Ukrainskoy SSR (Institute of Organic Chemistry of the Academy of Sciences, Ukrainskaya SSR)

SUBMITTED: May 20, 1958

Card 3/3

IVANOVA, Zh. M.; KIRSANOVA, N.A.; DERKACH, G.I.

Derivatives of N-acyliminocarbonic acid chlorides. Zhur. org. khim. 1 no. 12:2186-2191 D '65 (MIRA 19:1)

1. Institut organicheskoy khimii AN UkrSSR. Submitted December 25, 1964.

KIRSANOV, A.V.; KIRSANOVA, N.A.

N-arylsulfonylethylene- and hexamethylenediamines. Zhur.ob.khim. 32 no.3:887-892 Mr '62. (MIRA 15:3)

1. Institut organicheskoy khimii i Institut monomerov i polimerov AN Ukrainskoy SSR.
(Ethylenediamine) (Hexanediamine)

IVANOVA, Zh.M.; DERKACH, G.I.; KIRSANOVA, N.A.

Derivatives of N-acylisothiocyanates. Zhur. ob. khim. 34 no.10: 3516-3518 O '64. (MIRA 17:11)

1. Institut organicheskoy khimii AN UkrSSR.

S/058/62/000/007/063/068
A062/A101

26.2311

AUTHOR: Kirsanova, N. N.

TITLE: About the problem of measuring the temperature of a d.c. arc

PERIODICAL: Referativnyy zhurnal, Fizika, no. 7, 1962, 55 - 56, abstract 7Zh372 ("Tr. Voronezhsk. un-ta", 1961, v. 55, 105 - 110)

TEXT: By the method of measuring the relative intensity of spectral lines, the temperature of a direct current arc, burning in the air at the atmospheric pressure, was determined, and the temperature distribution over the section of the arc (current of the arc - 4.5 a; distance between the electrodes, made of coal powder with additions , - 7 mm) was investigated. The image of the arc column was projected onto the slit of a ИСП-22 (ISP-22) spectrograph (in such a manner that the axis of the arc was perpendicular to the slit) and the lines of the Cu spectrum in the 5,100 - 5,200 Å range were photometered. For determining the intensity distribution I(r) of the radiation along the radius of the column, use was made of the Horman transformation

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S/058/62/000/007/063/068
A062/A101

About the problem of...

$$I(r) = -1/\pi \int_{r}^{r_o} \frac{I'_x(x)dx}{\sqrt{x^2-r^2}}$$

[I(x) being the intensity distribution along a spectral line]. In this way the intensity distributions of the lines along the radius were calculated, and their ratio permitted the determination of the temperature distribution over the cross section of the arc column. The temperature of the arc which is 4,700°K in the centre, decreases to 4,100°K at the radius of 2.2 mm. The average temperature for the whole volume is equal to 4,300°K and coincides with the temperature measured when lighting the slit in the usual way (without applying a transverse photometry).

Yu. Knizhnikov

[Abstracter's note: Complete translation]

Card 2/2

41237

S/194/62/000/007/116/160
D271/D308

AUTHOR: Kirsanova, N.N.

TITLE: The problem of measuring the temperature of a DC arc

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 7, 1962, abstract 7zh372 (Tr. Voronezhsk. un-ta, 1961, v. 55, 105 - 110)

TEXT: Measurement of relative intensity of spectral lines was used in determining the temperature of a DC arc in air, at atmospheric pressure, and in studying temperature distribution over the cross-section of the arc (arc current - 4.5 A; distance between electrodes - 7 mm; electrodes of carbon powder with additives). The image of arc column was projected onto the slot of a spectrograph ИСП-22 (ISP-22) (so as to have the arc axis perpendicular to the slot) and Cu spectrum lines in the range of 5100 - 5200 Å were photo-metered. Horman transformation

$$I(r) = -1/\pi \int_r^{r_0} \frac{I_\lambda'(x)\,dx}{\sqrt{x^2 - r^2}}$$

Card 1/2

The problem of measuring the ... "

(where I(x) is intensity distribution along the spectral line) was used in determining radiation intensity along the radius of the column I(r). In this way, intensity distributions along the radius were calculated and from their ratios temperature distribution in the cross-section of the arc column is found. Arc temperature in the middle is 4700°K and drops to 4100°K at a radius of 2.2 mm. Volume averaged temperature is 4300°K and this agrees with the value measured by illuminating the slot in the usual manner (without perpendicular photographing). [Abstracter's note: Complete translation]

Card 2/2

S/035/62/000/010/011/128
A001/A101

3.2410

AUTHOR: Kirsanova, N. N.

TITLE: From experience of visual observations of Earth artificial satellites

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 10, 1962, 15 - 16, abstract 10A145 ("Byul. st. optich. nablyudeniya iskusstv. sputnikov Zemli", 1961, no. 23, 19 - 20)

TEXT: The author reports on using nomograms in observations of Earth artificial satellites.

[Abstracter's note: Complete translation]

Card 1/1

KIRSANOVA, N.N. (Voronezh)

Practice of visual observation of artificial satellites. Biul.-sta.opt.nabl.isk.sput.Zem. no.23:19-20 '61. (MIRA 15:3)

1. Stantsiya nablyudeniy iskusstvennykh sputnikov Zemli No.015.
(Artificial satellites--Tracking)

SEMENOV, L.V.; DAVYDOV, V.P.; SHISHAKOV, N.V.; CHUKANOVA, O.M.; KIRSANOVA, O.P.

Prospects for and the economic effectiveness of using trapped emulsions and watery petroleum products in the preparation of acetylene. Khim. i tekh. topl. i masel 8 no.7:40-44 Jl '63. (MIRA 16:7)

1. Institut goryuchikh iskopayemykh Akademii nauk SSSR.
(Acetylene) (Petroleum products) (Cracking process)

KIRSANOVA, O.P.; SIMONOV, I.V.

Economic efficiency of air-suspension [illegible] transportation. Izv. VUZ 20:46-50 '63. (MIRA 17:8)

SEMENOV, L.V.; KIRSANOVA, O.P.; DAVYDOV, V.P.

Economics of and prospects for the use of peat in the by-product coke industry. Trudy IGI 20:237-242 '63.
(MIRA 17:8)

KIRSANOVA, R.P.; VLODAVETS, M.L.; BYK, S.Sh.

Absorption method for determining the moisture content of mixtures of hydrocarbon gases. Gaz. prom. no.4:44-47 Ap '58. (MIRA 11:4)
(Gases--Analysis)

KIRSANOVA, R.P.; BYK, S.Sh.

Liquid - vapor equilibrium in an acetaldehyde - methanol system at atmospheric pressure. Zhur. prikl. khim. 31 no.10:1610-1612 O '58. (MIRA 12:1)
(Acetaldehyde) (Methanol) (Phase rule and equilibrium)

KIRSANOVA, R.P.; BYK, S.Sh.

Liquid - vapor equilibrium in the system allyl alcohol - isopropyl alcohol at atmospheric pressure. Zhur. prikl. khim. 33 no.12:2784-2786 D '60. (MIRA 14:1)

(Allyl alcohol) (Isopropyl alcohol)

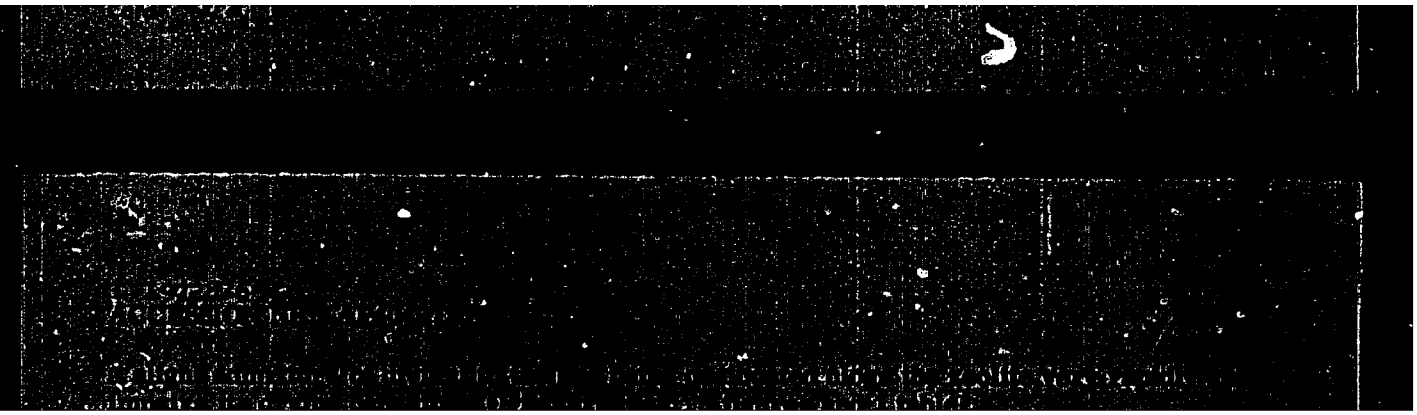
BYK, S.Sh.; KIRSANOVA, R.P.

Separation of certain hydrocarbon mixtures by means of diffusion through nonporous organic membranes. Zhur. fiz. khim. 34 no.12: 2844 D '60. (MIRA 14:1)
(Diffusion) (Membranes (Chemistry))

KIRSANOVA, R.P.; BYK, S.Sh.

Liquid vapor equilibrium in the system acrolein - acetone at the pressure of 200 mm. of Hg. Zhur.prikl.khim. 35 no.1:198-199 Ja '62. (MIRA 15:1)

(Acrolein) (Acetone) (Phase rule and equilibrium)



KIRSANOVA, R.P.; BYK, S.Sh.

Using synthetic zeolites for deep drying of propylene. Nefteper. i neftekhim. no.6:35-39 '65. (MIRA 18:7)

1. NIISS.

RYZHKOV, D.A., redaktor; STOROZHEV, M.V., redaktor; KIRSANOVA, S.B., redaktor; SAKSAGANSKIY, T.D., inzhener, redaktor.

[Economising metals in forging and stamping] Ekonomiia metallov v kuznechnoshtampovochnom proizvodstve. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1953. 273 p. (MLRA 7:1)
(Forging) (Punching machinery)

KIRSANOVA, S.B.

MALOV, A.N.; PREYS, V.F.; MALIKOV, A.N., retsenzent; inzhener; MANAKIN, N.B., redaktor; KIRSANOVA, S.B., inzhener, redaktor; POPOVA, S.V., tekhnicheskiy redaktor.

[Mechanization and automatization of punch-press work] Mekhanizatsiia i avtomatizatsiia shtampovochnykh rabot. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroitel'noi lit-ry, 1955. 307 p. (Sheet-metal work--Stamping) (MLRA 8:11)

BABENKO, V.A., inzh.; BRYUKHANOV, A.N., kand.tekhn.nauk; VLADIMIROV, M.F., inzh.; GERSHMAN, M.S., inzh.; GLUSHKOV, V.N., inzh.; GOLOVNEV, I.F., inzh.; GOSTEV, V.I., inzh.; KHRUSHCHEV, V.V., inzh.; MALIKOV, A.N., inzh.; MANSUROV, A.M., inzh.; MARTYNOV, V.N., kand.tekhn.nauk; MYSOZHNIKOV, V.M., kand.tekhn.nauk; NAVROTSKIY, G.A., kand.tekhn.nauk; RASKIND, V.L., inzh.; RUBEL'SKIY, A.V., kand.tekhn.nauk; SKVORTSOV, A.A., kand. tekhn.nauk; SOKOLOV, I.G., kand.tekhn.nauk; STOROZHEV, M.V., kand. tekhn.nauk; FEDOROV, A.F., inzh.; KHRZHANOVSKIY, S.M., prof., doktor tekhn.nauk; TSUKERMAN, M.T., inzh.; SHAPOSHNIKOV, D.Ye., inzh.; SHEPELYAKOVSKIY, K.Z., kand.tekhn.nauk; SHMYKOV, A.A., doktor tekhn. nauk; YAKOVLEV, V.G., inzh.; KIRSANOVA, S.B., inzh., red.; GLINER, B.M., inzh., red.izd-va; SOKOLOVA, T.F., tekhn.red.

[Technological handbook on forging and die forging] Tekhnologicheskii spravochnik po kovke i ob"emnoi shtampovke. Moskva, Gos.nauchno-tekhn. izd-vo mashinostroit.lit-ry, 1959. 966 p. (MIRA 12:4)
(Forging)

SOV/122-59-4-15/28

AUTHORS: Storozhev, M.V., (Cand.Tech.Sci., Docent), Semenov, Ye.I., (Cand.Tech.Sci., Docent), and Kirsanova, S.B., Engineer

TITLE: Refinement of the Pattern of the Deformation Core and Determination of the Force in Die Stamping (Utochneniye formy ochaga deformatsii i opredeleniye usiliya pri shtampovke)

PERIODICAL: Vestnik Mashinostroyeniya, 1959, Nr 4, pp 55-61 (USSR)

ABSTRACT: When forging in an open die, after the first stage of filling the die cavity, the second stage consists of pressing the excess metal from the die cavity into the flash and calibrating the height of the forging (upsetting). The maximum forging pressure occurs during upsetting. To find the relation between the dimensions of the deformation core and the thickness of the flash, tests were carried out with lead. Specimen blanks were split in two halves and a grid was drawn on one half. Both halves together were upset in the die, after which the half with the grid (Fig 2) was photographed. The deformed grid exhibits three zones, namely the zone of large deformation, the zone of small

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Refinement of the Pattern of the Deformation Core and Determination of the Force in Die Stamping

deformation and the undeformed zone. The first zone includes the flash. The tests were carried out with different flash thicknesses. Specimens with a large thickness revealed the three zones more clearly. The dimensions before and after the final forging deformation are tabulated (Table 1). Several geometric quantities were recorded in specimens after the tests leading to the mean height (thickness) of the flash during the calibrating period. In forgings with small flash thicknesses similar to those obtained in practice, the deformation core is small. To obtain a better measure of the deformation core, a further test was conducted. The specimen was photographed after upsetting and the die was subsequently ground down in the parting plane by the amount of flattening of the flash. The flash formed during upsetting was removed down to the forging diameter, and the forging operation was repeated. A substantial degree of deformation was achieved in the centre of the specimen without changing the conditions of upsetting and the degree of deformation of the flash. The plotting

of the deformation core by this procedure presented no further difficulties. The relative thicknesses of deformation zones were plotted against the relative diameters of the forging (Figs 5 and 6). The thickness of the first zone at half the forging radius differed little from combined axial thicknesses of the first and second zones. The thickness of the deformation zones at half the radius away from the axis was also plotted and found, like the thickness along the axis, to increase progressively with the ratio of the diameter to the flash thickness. The thickness along the axis of the deformation zone did not vanish even at small diameter/flash thickness ratios. When these ratios were about 20, the ratio of deformation zone thickness to flash thickness was about 3.5. The diameter/flash thickness ratio also affects the pattern of the deformation zone. At a ratio of 3, the deformation zone is a bi-concave lens. At large ratios, the "lens" becomes bi-convex. The usual analytical solution for the deformation zone assumes this to be conical or a stepped profile. A better solution

Refinement of the Pattern of the Deformation Core and Determination of the Force in Die Stamping

assumes an elliptical shape. With the help of simplifying assumption (plane strain), the forging pressures are obtained by analysis. For forgings which are round or nearly round in planform, the equilibrium equations are used in spherical coordinates when the deformation is axially symmetrical. The analysis of this case is also treated.

There are 11 figures, 2 tables and 8 Soviet references.

ACCESSION NR: AP4011290 S/0136/64/000/001/0066/0069

AUTHOR: Natapova, R. I.; Kirsanova, T. A.; Malikova, L. P.; Sokolov, Yu. A.; Parusnikov, V. N.

TITLE: Cold drawing of tantalum wire

SOURCE: Tsvetny*ye metally*, no. 1, 1964, 66-69

TOPIC TAGS: tantalum wire, tantalum wire drawing, tantalum copper plating, cold drawing, wire drawing, copper plated tantalum wire

ABSTRACT: A method for smooth drawing of tantalum wires (Authors certificate Nr. 148373) was devised to eliminate wire rupture and gas absorption by the metallic wires which cause the wire to possess poor mechanical properties. Since the use of ordinary lubricants and oxidizing of the metal surface does not eliminate these difficulties, it is proposed that the tantalum material after cleaning be copper plated by hot dipping in an inner atmosphere. Hot-drawn wire was cleaned of aquadag and oxides by electrolytic etching. Hot copper plating of

Card 1/2

ACCESSION NR: AP4011290

the cleaned wire was done in argon by drawing the wire through a graphite crucible with molten copper. Rate of drawing and temperature must be strictly controlled for uniform coating. The latter is uniformly deformed during cold drawing and does not peal off. Cold drawing of 100-200 micron diam. wire(coating 1-2 microns) to a maximum size of 40-60 microndiam. can be achieved. For drawing to finer wires electrolytic copper plating should be superimposed thereon (100-200 micron diam primary wire 10-20 micron diam final wire, 3-5 micron coating achieved in two passages at a rate of 1.5-2 m/min, 20sec. in the bath, 20 amp/sq. in. current density). Electrolytic coating should be applied over etched hot coating for better uniformity and smoother drawing of small gauge wires. After drawing, coating should be electrolytically or chemically removed. Thus, perfect cold drawing of finest gauges becomes possible due to copper plating. Rate of drawing ranges from 20-15 m/min for 30-250 micron diam to 8-2 m/min- for 10-30 micron diam. Orig. art has: 3 figures.

ASSOCIATION: None

SUBMITTED: 00 DATE ACQ: 14Feb64 ENCL: 00

SUB CODE: EL NO REF SOV: 005 OTHER: 002

Card 2/2

69427

S/109/60/005/05/015/021
E140/E435

24.2130

AUTHORS: Shul'man, A.R., Kirsanova, T.S. and Pavlov, V.K.

TITLE: The Work Function of Thin Films of Barium Oxide on a Tungsten Base

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol 5, Nr 5, pp 840-848 (USSR)

ABSTRACT: The dynamic variation of barium-oxide work function at various temperatures of a tungsten base is determined. The process is more complicated than in the case of metal-atom films, since along with evaporation and migration the film state is effected through chemical reactions with the base material. The film thickness was estimated from optical measurements and deposition time. Measurements of work function indicated the following: a) The variation of work function with film thickness has a monotonic character. b) The curve of film work function against thickness at various rates of deposition does not vary appreciably. Although there are certain common features in the behaviour of barium and barium-oxide films on tungsten base, the barium-oxide films are subject to different laws from the barium films.

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4

69927
S/109/60/005/05/015/021
E140/E435

The Work Function of Thin Films of Barium Oxide on a Tungsten Base

For barium the work function curve has a minimum, for barium oxide monotonic curves are obtained. The results are closer to those obtained by V.M.Gavrilyuk (Ref 3,5) than those of Russel and Moore (Ref 1,2). It is concluded that the processes occurring with heating of the films are fairly complex and it is not possible to explain them by any single phenomenon, for example evaporation, but at least two processes occur, one of which leads to increase and the other to decrease of the work function. Therefore, deactivation curves of the barium-oxide-tungsten system cannot be directly treated as desorption curves. Further experimental work is necessary in which the assumed elementary processes can be separated. There are 7 figures, 1 table and 5 references, 2 of which are Soviet, 1 English and 2 English in Russian translation.

ASSOCIATION: Leningradskiy politekhnicheskiy institut im. M.I.Kalinina (Leningrad Polytechnical Institute imeni M.I.Kalinin)

SUBMITTED: July 6, 1959

Card 2/2

26.2312
9.3120 (1003, 1137, 1140)

S/109/60/005/008/005/024
E140/555

AUTHORS: Kirsanova, T.S., Shul'man, A.R. and Engovatova, N.I.

TITLE: Emissivity of Thin Barium Oxide Films on Metal Bases

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol.5, No.8, pp.1225-1232

TEXT: In the study of thin films, the emissivity provides a fuller evaluation of the state of the system than a knowledge of work function. Further, emissivity is of independent interest since, in the last analysis, it is precisely emissivity that is the important characteristic. Nevertheless both indices give only aggregate results and are no measure of the individual elementary processes (evaporation, migration, chemical reaction, etc.). The present work therefore studies the variations of emissivity of thin barium oxide films on tungsten occurring as a result of prolonged heating at various temperatures. The results of the study indicate that the emissivity of these systems depends substantially on temperature and on the heat-treatment cycle of the films. Optimum emissivity is obtained at definite temperatures. This is taken to indicate that variations in film state are not connected only with

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S/109/60/005/008/005/024
E140/E555

Emissivity of Thin Barium Oxide Films on Metal Bases

evaporation of active material, since variation of work function with thickness occurs monotonically. It is necessary to suppose the existence of at least two elementary processes. The curves obtained suggest the usual activation characteristic of an oxide cathode. It is therefore supposed that at temperatures of the order of 1200-1400°K, free barium appears in the systems studied. An inverse relationship is found between the thickness of optimal coating and activation temperature. However, the Richardson work function is independent of initial film thickness. It is proposed that increase of emission is not connected with decrease of work function but with variation of the area of the emitting centres, directly related to coating thickness at low thicknesses. It is supposed that the variations observed are connected with changes of state of the film material. The data obtained also are consistent with the concept of migration of particles over the surface during heat-treatment. Acknowledgments are made to the graduate student V. I. Zarudnyy for his assistance. There are 6 figures, 2 tables and 8 references: 6 Soviet and 2 non-Soviet

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S/109/60/005/008/005/024
E140/E555

Emissivity of Thin Barium Oxide Films on Metal Bases

ASSOCIATION Leningradskiy politekhnicheskiy institut imeni M. I. Kalinina (Leningrad Polytechnical Institute imeni M. I. Kalinin)

SUBMITTED: December 21, 1959

Card 3/3

83270

S/109/60/005/009/017/026
E140/E455

9.3120

AUTHORS: Kirsanova, T.S. and Sakharov, I.Ye.

TITLE: Work Function of Thin Barium Oxide Films on Molybdenum Base

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol.5, No.9, pp.1500-1507

TEXT: An oscillographic method for measuring work function from the shift of volt-ampere characteristics has been developed, substantially shortening the duration of the measurement and reducing the intensity of electron bombardment of the sample. A feedback circuit is used in which variation of contact difference of potential is compensated to maintain the potential between the anode and the cathode constant. All possible causes for a change in the slope of the characteristics, for example, cathode heating currents, have been reduced to a minimum. Hence, the only cause for change in slope admitted by the authors is a change in contact difference of potentials. The change was read on a pointer instrument and also observed on the oscillograph screen. Measurements were carried out in an experimental diode (Fig.3) at residual pressures of the order of 10^{-9} mm Hg. In each sealed-off

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83270

S/109/60/005/009/017/026
E140/E455

Work Function of Thin Barium Oxide Films on Molybdenum Base

device a film of barium oxide was first deposited on a tungsten or molybdenum base at room temperature. The final work function in either case was between 1.7 to 1.9 eV, with scatter not exceeding 0.3 eV. The effects of heat treatment were then investigated. Compound curves (Fig.6) are plotted to show the behaviour of BaO films on Mo as functions of initial thickness, duration of heating and temperature of heat treatment. The results of the present work were compared with those of Ref.3, in which Ba-W systems were studied. It was found, as before, that the temperature at which variation of work function begins depends substantially on film thickness and the processes occuring in the heat treatment of the films increased the work function. However, the threshold temperature is higher for molybdenum than for tungsten. Good agreement with Narita's results is claimed, but not with those of Moore and Allison (Ref.5). Deactivation curves of BaO-Mo systems are similar to those of BaO-W. It is assumed that the basic process leading to increase of work function is evaporation of the layer but the identity of the evaporation product remains unknown. Qualitative agreement of the present results is claimed

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83270

S/109/60/005/009/017/026
E140/E455

Work Function of Thin Barium Oxide Films on Molybdenum Base

with those of Ref.7 to 11. Anomalies in the curve shape, and differences in the behaviour of the films on tungsten and molybdenum, may be explained on the basis of chemical reactions. Finally, agglomeration of barium oxide may have a substantial role in the processes studied. There are 6 figures, 1 table and 11 references: 6 Soviet and 5 English.

ASSOCIATION: Leningradskiy politekhnicheskiy institut im. M.I.Kalinina
(Leningrad Polytechnical Institute im. M.I.Kalinin)

SUBMITTED: August 5, 1959

Card 3/3

40899
S/181/62/004/009/039/045
B104/B186

24.7000,
26.1400

AUTHORS: Kirsanova, T. S., Shul'man, A. R., and Dement'yeva, A. V.

TITLE: Work function of thin barium oxide films applied to heated tungsten

PERIODICAL: Fizika tverdogo tela, v. 4, no. 9, 1962, 2615-2617

TEXT: The change in the work function of a·BaO-W system was determined as a function of the temperature of the W band during the spray coating of BaO. At pressures of the residual gas of $(1-2)\cdot10^{-9}$ mm Hg, BaO was sprayed onto bands of temperatures between 800 and 1500°K. The dependence of the work function φ on the coating time t was determined for various temperatures of the W bands (Fig.). After some hours of spraying, φ becomes virtually independent of the coating time (equilibrium). If such a film is annealed for some hours at the temperature of the W-band during the coating, a quasistationary state is obtained in which the work function of the system does not noticeably change even on further heating. Annealing of the W-band during the spraying yields much more active thermionic emitters and more solid films than spraying onto cold bands. There is 1 figure.

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S/181/62/004/009/039/045
B104/B186

Work function of thin barium...

ASSOCIATION: Leningradskiy politekhnicheskiy institut im. M. I. Kalinina (Leningrad Polytechnic Institute imeni M. I. Kalinin)

SUBMITTED: May 24, 1962

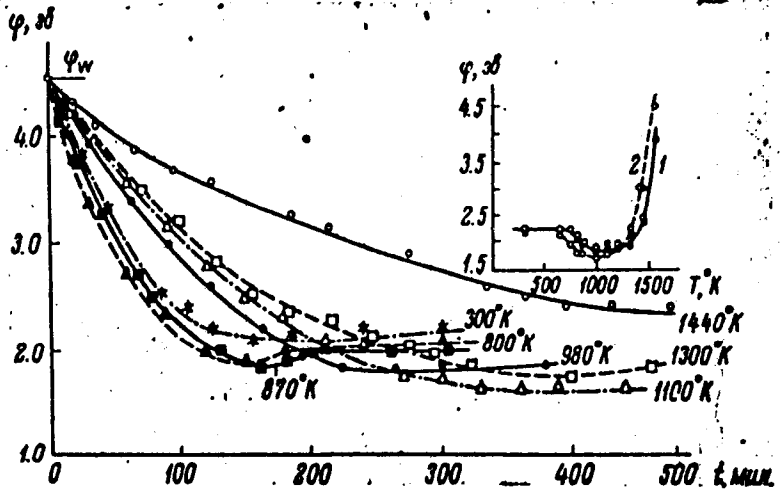

Fig. Dependence of the work function of the BaO-W system on the spraying time at various temperatures of the W-band during the spraying. Legend: (1) dependence of the equilibrium work function on the W-band temperature; (2) dependence of the quasistationary state on the W-band temperature.

Card 2/2

40900

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B104/B186

24.7400
26.1640

AUTHORS: Kirsanova, T. S., Shul'man, A. R., and Gerasimova, A. P.

TITLE: Adsorption of barium oxide on the (110) face of a tungsten single crystal

PERIODICAL: Fizika tverdogo tela, v. 4, no. 9, 1962, 2617-2620

TEXT: The experiments were made with a method developed earlier (T. S. Kirsanova, I. Ye. Sakharov, Radiotekhn. i elektron., 5, 69, 1960). The (110) face of a tungsten single crystal was prepared at the Laboratoriya kafedry elektrofiziki Tashkentskogo gosudarstvennogo universiteta (Laboratory of the Department of Electrophysics of Tashkent State University). The experimental arrangement permitted heat treatment of the single crystal at temperatures up to 2600°K and simultaneous bombardment with electrons. The barium oxide was applied at a constant spraying rate of 0.015 monolayers/minute. The dependence of the work function on the temperature of the single crystal during the spraying was determined (Fig.). Results: When BaO is sprayed onto hot W backings, the adsorptive and thermionic properties of the BaO-W system depend

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Adsorption of barium oxide on...

considerably on the crystallographic orientation of the faces. Unlike in the adsorption of BaO on polycrystalline backings or on not densely packed tungsten atoms (T. S. Kirsanova et al., FTT, v. 4, no. 9, 1962, p. 2617; Radiotekhnika i elektron., 5, 840, 1960) the work function in the interval between room temperature and 1150°K does not decrease when BaO is adsorbed on densely packed W atoms. This is explained by the single-phase adsorption of barium oxide on the densely-packed tungsten surface atoms. There is 1 figure.

ASSOCIATION: Leningradskiy politekhnicheskiy institut im. M. I. Kalinina (Leningrad Polytechnic Institute imeni M. I. Kalinin)

SUBMITTED: May 24, 1962

Fig. Work function versus coating time t (minutes) at various temperatures of the W single crystal.
Legend: (1) 500°K; (2) 650°K; (3) 750°K; (4) 870°K; (5) 900°K; (6) 1150°K (annealing temperatures). Backing temperatures: (7) 300°K; (8) 650°K; (9) 750°K; (10) 870°K; (11) 900°K; (12) 1000°K; (13) 1150°K.

Card 2/2

KIRSANOVA, T.S.; SHUL'MAN, A.R.; GERASIMOVA, A.P.

Adsorption of barium oxide on face (110) of a tungsten single crystal. Fiz. tver. tela 4 no.9:2617-2620 S '62. (MIRA 15:9)

1. Leningradskiy politekhnicheskiy institut imeni Kalinina.
(Barium oxide) (Tungsten crystals)

KIRSANOVA, T.S.; SHUL'MAN, A.R.; DEMENT'YEVA, A.V.

Work function of thin films of barium oxide on heated tungsten.
Fiz. tver. tela 4 no.9:2615-2617 S '62. (MIRA 15:9)

1. Leningradskiy politekhnicheskiy institut imeni Kalinina.
(Barium oxide) (Tungsten) (Work function (Physics))

L 10815-63 EWT(1)/BDS(?)/EDS/EEC(b)-2/ES(v)-2--AFFTC/ASD/ESD-3/
SSD--Pz-4/Pab-4--AT/IJP(C)

ACCESSION NR: AP3003723 S/0109/63/008/007/1222/1232

AUTHOR: Kirsanova, T. S.; Shul'man, A. R.

TITLE: Variations in work function of a BaO-W system during substrate heating

SOURCE: Radiotekhnika i elektronika, v. 8, no. 7, 1963, 1222-1232

TOPIC TAGS: barium oxide—tungsten system, tungsten substrate heating, barium oxide two-phase adsorption, tungsten, barium oxide

ABSTRACT: Variations in emission properties of BaO-W systems during substrate heating have been investigated. Tungsten strips (99.97% W, 0.02% Mo) on which BaO was deposited served as substrates. Platinum wire spirals (99.99% Pt) containing barium carbonate (transformed into barium oxide by heating) were used for depositing BaO on the substrates. Measurements were made in sealed devices at residual gas pressures of 10^{-8} to 2×10^{-9} mm Hg by determining the contact potential difference. These measurements served to determine the dependence of the work function of the system on deposition and heating time. It was found that 1) the decrease in the work function of tungsten with a BaO layer depends on substrate temperature during deposition, and the more active emitting films

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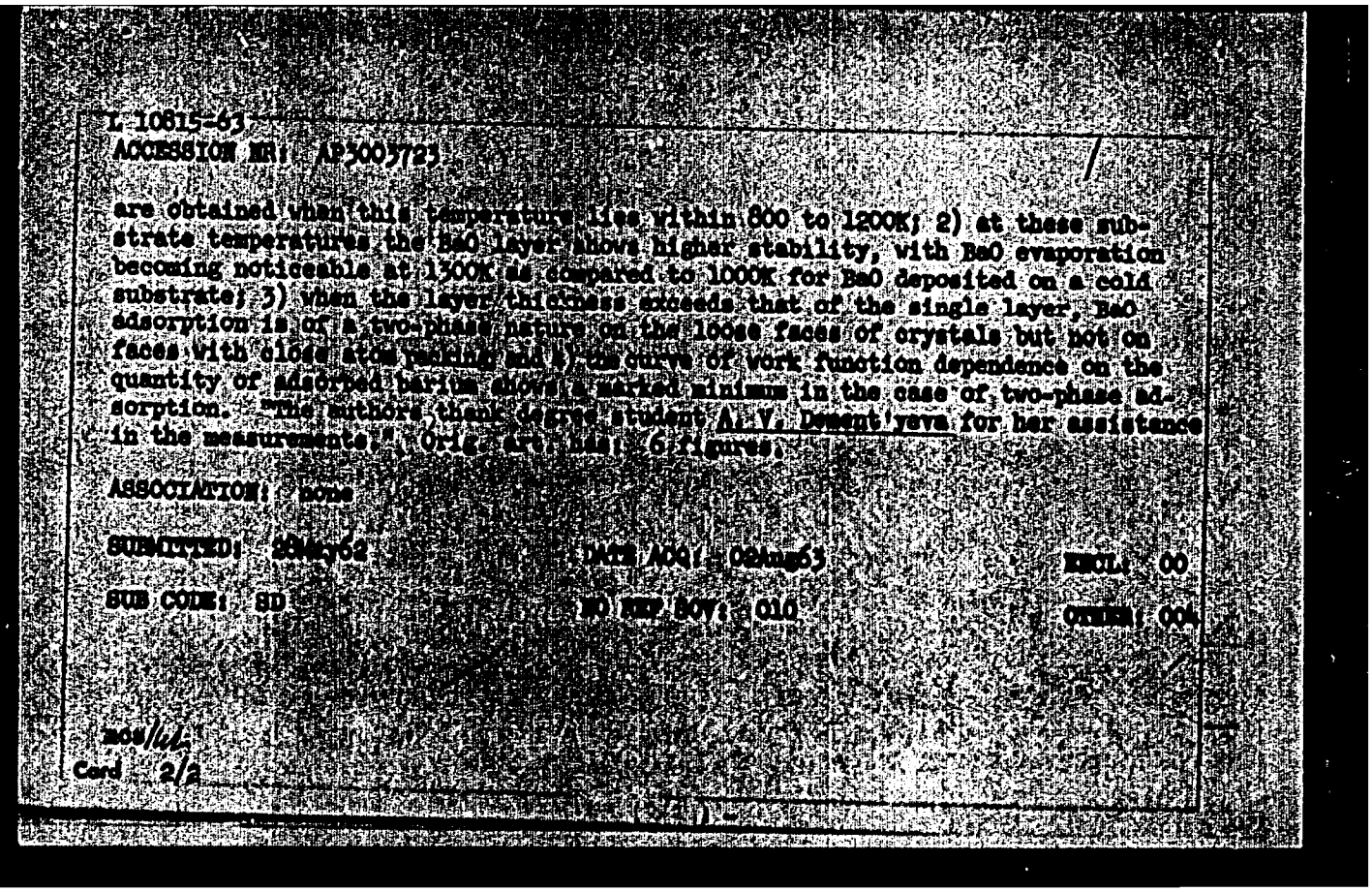

L 10815-63
ACCESSION NR: AP3003723

are obtained when this temperature lies within 800 to 1200K; 2) at these substrate temperatures the BaO layer shows higher stability, with BaO evaporation becoming noticeable at 1300K as compared to 1000K for BaO deposited on a cold substrate; 3) when the layer thickness exceeds that of the single layer, BaO adsorption is of a two-phase nature on the loose faces of crystals but not on faces with close atom packing; and 4) the curve of work function dependence on the quantity of adsorbed barium shows a marked minimum in the case of two-phase adsorption. "The authors thank [illegible] student A. V. Dement'yeva for her assistance in the measurements." Orig. art. has: 6 figures.

ASSOCIATION: none

SUBMITTED: 28May62 DATE ACQ: 02Aug63 ENCL: 00

SUB CODE: SD NO REF SOV: 010 OTHER: 004

ACS/ld
Card 2/2

ACCESSION NR: AP4011768 S/0181/64/006/001/0282/0289

AUTHORS: Kirsanova, T. S.; Shul'man, A. R.

TITLE: The nature of the dependence of the work function in the system barium oxide plus metal on the degree of surface covering

SOURCE: Fizika tverdogo tela, v. 6, no. 1, 1964, 282-289

TOPIC TAGS: work function, barium oxide, barium oxide plus metal, molybdenum, tungsten, surface covering, activated adsorption, nonactivated adsorption, adsorption

ABSTRACT: This is a continuation of work done by these authors, partly in cooperation with others, on this same general problem. It has been shown previously that the nature of the curve for $\varphi = \varphi(\theta)$, where φ = work function and θ = degree of surface coverage is affected by the adsorption of BaO molecules in both phases of adsorption (nonactivated and activated). In the case of W, it was not possible to observe surface coverage of both phases because they overlap the temperature range in which active adsorption and evaporation occur. Therefore, to obtain a proper picture of the dependence of $\varphi = \varphi(\theta)$ on the complete quantity of adsorbed BaO molecules, it proved of value to investigate the system BaO-Mo. With

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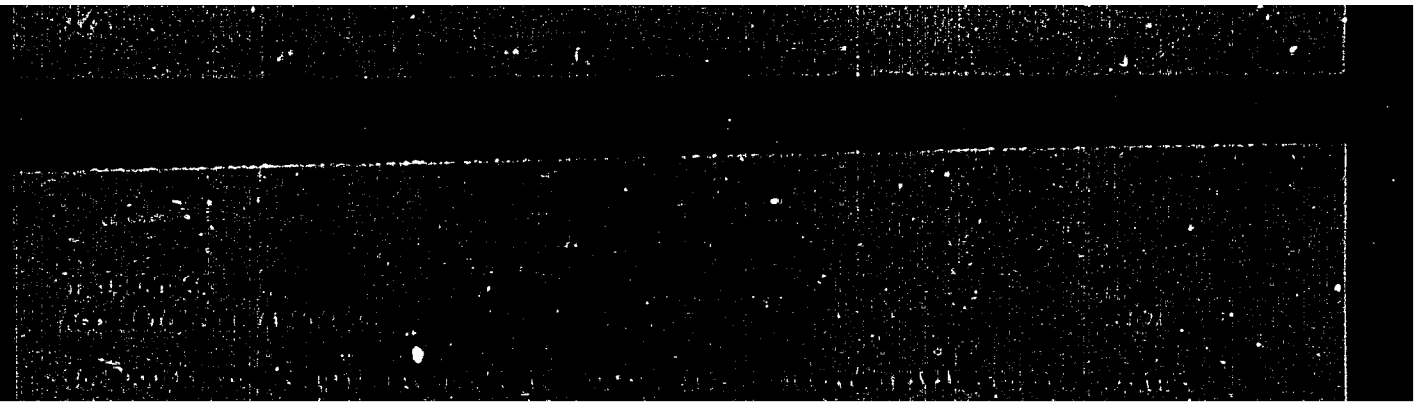
ACCESSION NR: AP4011768

Mo, evaporation of the BaO molecule takes place at temperatures approximately 200° higher than for W at the same degree of surface coverage. The authors show that low-temperature activation of thin BaO films is not associated completely with restoration of the BaO material on the substrate. The nature of the curve of $\varphi = \varphi(\theta)$ on the system BaO-metal is determined by the conditions under which the film is sputtered on: the temperature of preheating and the crystalline structure of the substrate. As a consequence of activated adsorption there occurs an increase in concentration of BaO molecules in the monomolecular surface cover, and this leads to a decrease in the work function of the monomolecular system and, consequently, to a change in the nature of the curve. If, in the temperature range where activation is observed, multilayered adsorption is possible, or if the entire surface of the crystal is covered (in the case of BaO-Mo), then the curve of $\varphi = \varphi(\theta)$ shows a well-defined minimum. "The authors express their thanks to the students A. I. Solov'yeva and Ye. S. Ovchinnikova, who participated in making the measurements." Orig. art. has: 3 figures.

ASSOCIATION: Politekhnicheskiy institut im. M. I. Kalinina, Leningrad (Polytechnical Institute)

Card 2/3



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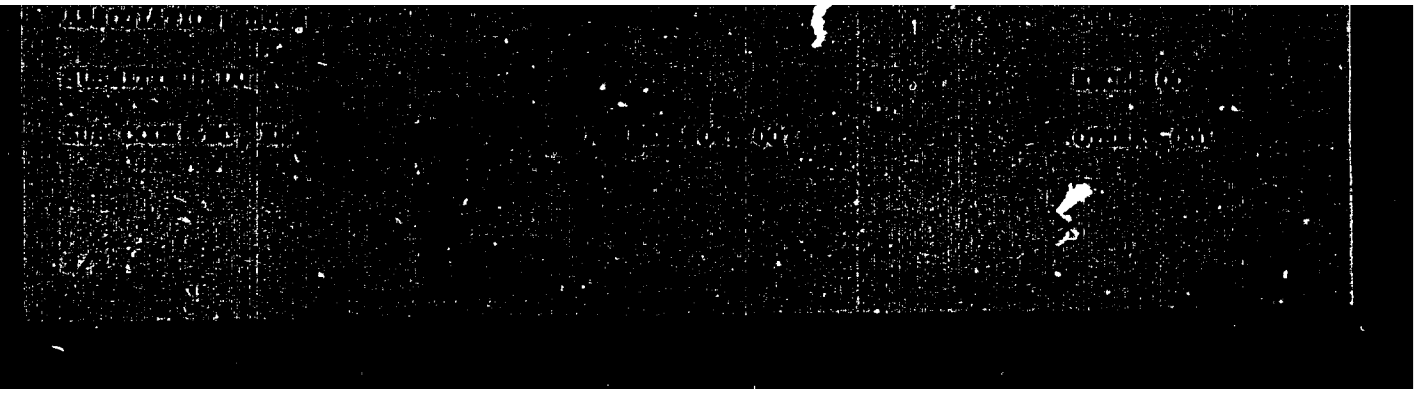

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CA

PROCESSES AND PROPERTIES INDEX

1B

Quantitative evaluation of starch and protein in barleys from different sources. N. N. Ivanov and Y. A. Kiuzenova. *Schriften zentral. biochem. Forschungsinst. Nahr.-Genussmittelind.* (U. S. S. R.) 3, 35-52(1933).—The common belief that high-protein barleys are more resistant than low-protein barleys to malting is erroneous; in fact, the diastatic effect is often superior, with better germination and higher starch conversion, in the high-protein grain. Hence barleys which have hitherto been considered fit only for feed, because of high protein content, are actually well suited for use in brewing.

Julian F. Smith

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION